

## WEST Search History

[Hide Items](#)[Restore](#)[Clear](#)[Cancel](#)

DATE: Tuesday, May 25, 2004

Hide?	Set Name	Query	Hit Count
		<i>DB=PGPB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L6	US-20020088138-A1.did.	1
		<i>DB=PGPB,USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L5	L4 and developer	4
<input type="checkbox"/>	L4	L3 and (sucking air)	34
<input type="checkbox"/>	L3	L2 and (blowing air)	1255
<input type="checkbox"/>	L2	L1 and cleaning	160658
<input type="checkbox"/>	L1	container or vessel or tank	2131183

END OF SEARCH HISTORY

# Hit List

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs
Generate OACS				

## Search Results - Record(s) 1 through 4 of 4 returned.

### ☐ 1. Document ID: US 20020088138 A1

L5: Entry 1 of 4

File: PGPB

Jul 11, 2002

PGPUB-DOCUMENT-NUMBER: 20020088138  
 PGPUB-FILING-TYPE: new  
 DOCUMENT-IDENTIFIER: US 20020088138 A1

TITLE: Cleaning and remanufacturing methods for developing container

PUBLICATION-DATE: July 11, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Murakami, Katsuya	Toride-shi		JP	
Nagatsuma, Mamoru	Kitasohma-gun		JP	
Suzuki, Teruo	Mitsukaidoh-shi		JP	
Nishimura, Kouzou	Toride-shi		JP	

US-CL-CURRENT: 34/437; 34/380, 34/487

## ABSTRACT:

A cleaning method for cleaning a developer container includes a step of blowing air through an opening formed in the developer container at a first flow rate; a step of sucking air through the opening at a second flow rate which is larger than the first flow rate; wherein while the blowing and suction steps are being simultaneously carried out, ambient air is permitted to enter the developer container through an ambient air inlet.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Ds
------	-------	----------	-------	--------	----------------	------	-----------	-----------	-------------	--------	------	---------

### ☐ 2. Document ID: US 6278853 B1

L5: Entry 2 of 4

File: USPT

Aug 21, 2001

US-PAT-NO: 6278853  
 DOCUMENT-IDENTIFIER: US 6278853 B1

\*\* See image for Certificate of Correction \*\*TITLE: Recycling method of toner container

h e b b g e e f e c h e f b e

DATE-ISSUED: August 21, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ban; Yutaka	Tokyo			JP
Murakami; Katsuya	Yokohama			JP
Tazawa; Fumio	Numazu			JP

US-CL-CURRENT: 399/109; 399/257

## ABSTRACT:

A recycling method for a toner supply container that is detachably mountable to a main assembly of an image forming apparatus to supply toner into the main assembly, includes the steps of providing a toner supply container including a filling opening for filling the toner, a supply opening for supplying the toner, a first seal member for sealing the filling opening, and a second seal member for sealing the supply opening; a first step of dismounting the first and second seal members from the toner supply container; a second step, after the first step, of cleaning an inside of the toner supply container by blowing air into the toner supply container through either one of the filling opening and the supply opening, and simultaneously sucking the air through the other one of the openings; a third step, after the second step, of filling the toner through the filling opening.

30 Claims, 34 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 30

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	FIGS	Drawing De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--	--------	------	------------

☐ 3. Document ID: US 5793400 A

L5: Entry 3 of 4

File: USPT

Aug 11, 1998

US-PAT-NO: 5793400

DOCUMENT-IDENTIFIER: US 5793400 A

TITLE: Image recording apparatus by a wet type electro-photographic method and excess liquid developer removing device used in the apparatus

DATE-ISSUED: August 11, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mukoyama; Tatsuya	Yokosuka			JP
Ono; Tsuyoshi	Machida			JP
Okabe; Masahiko	Yamato			JP
Horiuchi; Ryuji	Yokohama			JP
Nakagami; Hiroki	Yokosuka			JP

US-CL-CURRENT: 347/140; 399/249

h e b b g e e e f e c h e f b e

## ABSTRACT:

The present invention provides an image recording apparatus and an excess liquid developer removing device used in the apparatus. In the image recording apparatus, the recording medium wound around the rotary drum is developed by liquid developer supplied from a developing device. A dish provided on the developing device is displaced in the vicinity of the recording medium wound around the rotary drum by being declined in a predetermined angle to prevent the bubbles from generating. The excess liquid developer attached on the recording medium is removed by the air from a nozzle of a blower. The nozzle is displaced by a nozzle displacing device in the vicinity of a developing electrode for supplying the liquid developer only in the midst of developing to prevent the nozzle from being choked up with toner contained in the liquid developer. Further, the excess liquid developer collected to an end of the recording medium by the air are removed by a part of the excess liquid developer absorbing member caused by the contact therewith.

14 Claims, 28 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 14

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Drawn By
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	----------

---

4. Document ID: JP 2002207365 A, US 20020088138 A1

L5: Entry 4 of 4

File: DWPI

Jul 26, 2002

DERWENT-ACC-NO: 2002-681657

DERWENT-WEEK: 200273

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Cleaning method for developer container, involves simultaneously performing blowing and suction steps such that ambient air is permitted to enter the developer container through ambient air inlet

INVENTOR: MURAKAMI, K; NAGATSUMA, M ; NISHIMURA, K ; SUZUKI, T

PRIORITY-DATA: 2001JP-0001466 (January 9, 2001)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 2002207365 A</u>	July 26, 2002		022	G03G015/08
<u>US 20020088138 A1</u>	July 11, 2002		040	F26B003/00

INT-CL (IPC): B08 B 5/02; B08 B 5/04; B65 D 83/04; B65 D 83/06; F26 B 3/00; F26 B 7/00; G03 G 15/08

ABSTRACTED-PUB-NO: US20020088138A

## BASIC-ABSTRACT:

NOVELTY - The method involves blowing air through an opening formed in a developer container at a first flow rate, and sucking air through the opening at a second flow rate which is larger than the first flow rate. The blowing and suction steps are simultaneously performed such that ambient air is permitted to enter the developer container through an ambient air inlet.

h e b b g e e f e c h e f b e

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recycling method for developer container.

USE - For cleaning developer container.

ADVANTAGE - Ensures efficient removing of foreign substances e.g. unwanted developer in a developer supply container, without deforming the developer supply container during cleaning.

DESCRIPTION OF DRAWING(S) - The figure shows the vertical sectional view of the electrophotographic copier, into which a toner supply container is mounted.

Full	Title	Citation	Front	Review	Classification	Date	Reference		Claims	Keyword	Drawn On
------	-------	----------	-------	--------	----------------	------	-----------	--	--------	---------	----------

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
-------	---------------------	-------	----------	-----------	---------------

Term	Documents
DEVELOPER	148864
DEVELOPERS	37663
(4 AND DEVELOPER).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	4
(L4 AND DEVELOPER).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	4

Display Format:

[Previous Page](#)

[Next Page](#)

[Go to Doc#](#)

# Hit List

Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs
Generate OACS				

**Search Results - Record(s) 31 through 34 of 34 returned.**

☐ 31. Document ID: US 3868814 A

L4: Entry 31 of 34

File: USPT

Mar 4, 1975

US-PAT-NO: 3868814

DOCUMENT-IDENTIFIER: US 3868814 A

TITLE: SPINNING FRAME HAVING TWO CONFRONTINGLY MOUNTED RING ROWS

DATE-ISSUED: March 4, 1975

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chiari; Natale	Colgone Bresciano			IT

US-CL-CURRENT: 57/305

ABSTRACT:

A spinning frame is disclosed of the kind having two confrontingly mounted spindle rows and three movable bars for each of said rows, which are adapted, respectively, to support the slider-carrying rings, the antiballooning containers and the thread guides, the improvement consisting in that the three movable bars enumerated above, relative to one of said rows, are made mechanically independent of the three bars relative to the other row. Thus the space comprised between the two fronts of the machine becomes freely available and is permitted to house ancilliary apparatus such as cleaning devices.

4 Claims, 5 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw. De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	-----	----------

☐ 32. Document ID: US 3807599 A

L4: Entry 32 of 34

File: USPT

Apr 30, 1974

US-PAT-NO: 3807599

DOCUMENT-IDENTIFIER: US 3807599 A

TITLE: FUEL ELEMENT STORAGE TANK FOR NUCLEAR POWER PLANTS

h e b b cg b cc e

DATE-ISSUED: April 30, 1974

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schettler; Kurt	Erlangen			DT
Kuster; Hermann	Erlangen			DT

US-CL-CURRENT: 376/272; 220/694, 250/428, 250/505.1, 976/DIG.272

ABSTRACT:

To avoid the escape of radioactive aerosols from the water surface of a fuel element storage tank, a continuous overflow of the water is maintained together with an air curtain disposed closely above the water surface.

9 Claims, 2 Drawing figures Number of Drawing Sheets: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Know	Draw De
------	-------	----------	-------	--------	----------------	------	-----------	--	--	--------	------	---------

☐ 33. Document ID: JP 2000313500 A

L4: Entry 33 of 34

File: JPAB

Nov 14, 2000

PUB-NO: JP02000313500A

DOCUMENT-IDENTIFIER: JP 2000313500 A

TITLE: CONTAINER CLEANING APPARATUS

PUBN-DATE: November 14, 2000

INVENTOR-INFORMATION:

NAME	COUNTRY
ASADA, KOJI	

INT-CL (IPC): B67 C 7/00

ABSTRACT:

PROBLEM TO BE SOLVED: To make cleaning of a container under erected condition and cleaning thereof under inverted condition by one process possible and to attempt to miniaturize an apparatus and to reduce the space for installation by providing an air blowing device for blowing air to a container to be cleaned and an air suction device for sucking air blown to the container to be cleaned.

SOLUTION: A container A carried by means of a container carrying conveyor 9 is stopped by means of a stopper 4 and when it reaches a container picking-up position, the container A is held by a hand 2. Then, the container A being held by the hand 2 is inverted along a cam rail 7A of a cam plate 7 in an inverting mechanism by rocking of an arm 3 and is carried to a placing position. During this period, the container A is inverted from an erected condition to an inverted condition and furthermore, to the erected condition, and during the process, cleaning in the container A is performed with air blown from an air blowing nozzle provided in the hand 2 and successively, the air in the container A is evacuated by suction through a vacuum hose passed through the hand 1.

h e b b cg b cc e

COPYRIGHT: (C) 2000, JPO

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	---------

---

34. Document ID: JP 2002207365 A, US 20020088138 A1

L4: Entry 34 of 34

File: DWPI

Jul 26, 2002

DERWENT-ACC-NO: 2002-681657

DERWENT-WEEK: 200273

COPYRIGHT 2004 DERWENT INFORMATION LTD

TITLE: Cleaning method for developer container, involves simultaneously performing blowing and suction steps such that ambient air is permitted to enter the developer container through ambient air inlet

INVENTOR: MURAKAMI, K; NAGATSUMA, M ; NISHIMURA, K ; SUZUKI, T

PRIORITY-DATA: 2001JP-0001466 (January 9, 2001)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 2002207365 A</u>	July 26, 2002		022	G03G015/08
<u>US 20020088138 A1</u>	July 11, 2002		040	F26B003/00

INT-CL (IPC): B08 B 5/02; B08 B 5/04; B65 D 83/04; B65 D 83/06; F26 B 3/00; F26 B 7/00; G03 G 15/08

ABSTRACTED-PUB-NO: US20020088138A

## BASIC-ABSTRACT:

NOVELTY - The method involves blowing air through an opening formed in a developer container at a first flow rate, and sucking air through the opening at a second flow rate which is larger than the first flow rate. The blowing and suction steps are simultaneously performed such that ambient air is permitted to enter the developer container through an ambient air inlet.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recycling method for developer container.

USE - For cleaning developer container.

ADVANTAGE - Ensures efficient removing of foreign substances e.g. unwanted developer in a developer supply container, without deforming the developer supply container during cleaning.

DESCRIPTION OF DRAWING(S) - The figure shows the vertical sectional view of the electrophotographic copier, into which a toner supply container is mounted.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw De
------	-------	----------	-------	--------	----------------	------	-----------	--------	------	---------

---



Clear	Generate Collection	Print	Fwd Refs	Blwd Refs	Generate OACS
-------	---------------------	-------	----------	-----------	---------------

Term	Documents
SUCKING	68083
SUCKINGS	5
AIR	2502395
AIRS	1635
(3 AND (SUCKING ADJ AIR)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	34
(L3 AND (SUCKING AIR)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	34

Display Format:

[Previous Page](#)

[Next Page](#)

[Go to Doc#](#)